



Delaware **STRATEGIC HIGHWAY SAFETY PLAN:** Toward Zero Deaths

DelDOT Winter Workshop Presentation
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Adam Weiser, PE, PTOE
DelDOT Safety Programs Manager

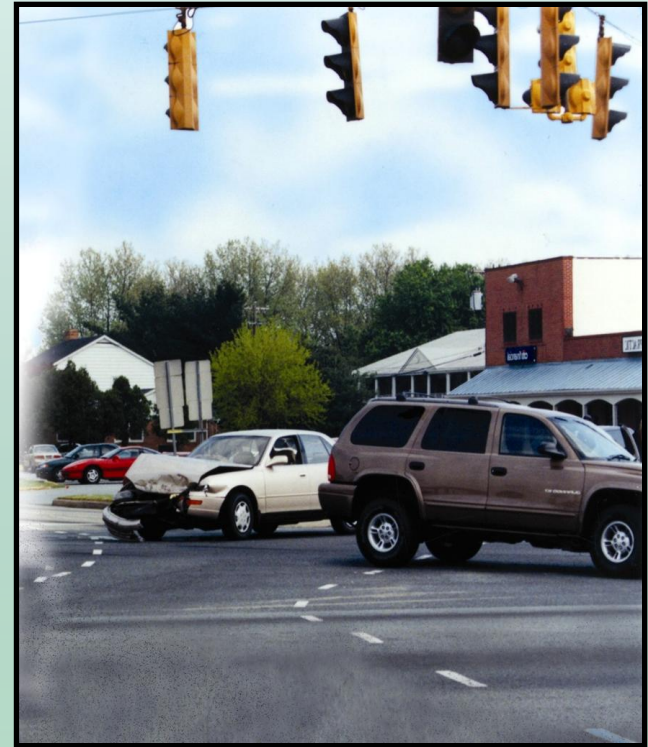
Agenda

- ◆ Purpose of SHSP
- ◆ Delaware's SHSP Timeline
- ◆ Overall Crash Trends
- ◆ Delaware's Program
 - Delaware's SHSP Process
 - Coordinating Agencies and Stakeholders
 - Mission and Vision Statements
 - Emphasis Area Selection and Goals
 - Emphasis Area Descriptions
 - Strategy Selection
 - Implementation

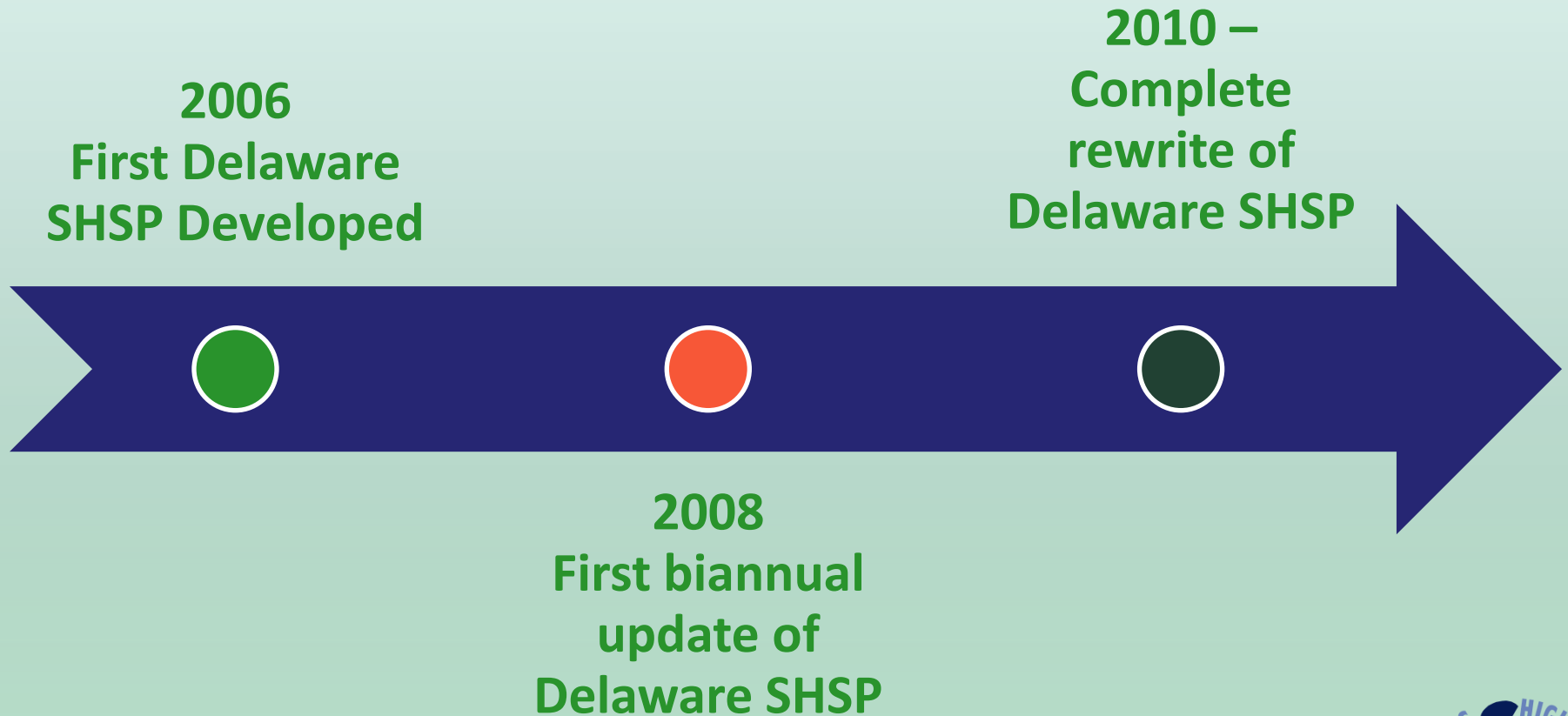


Purpose of SHSP

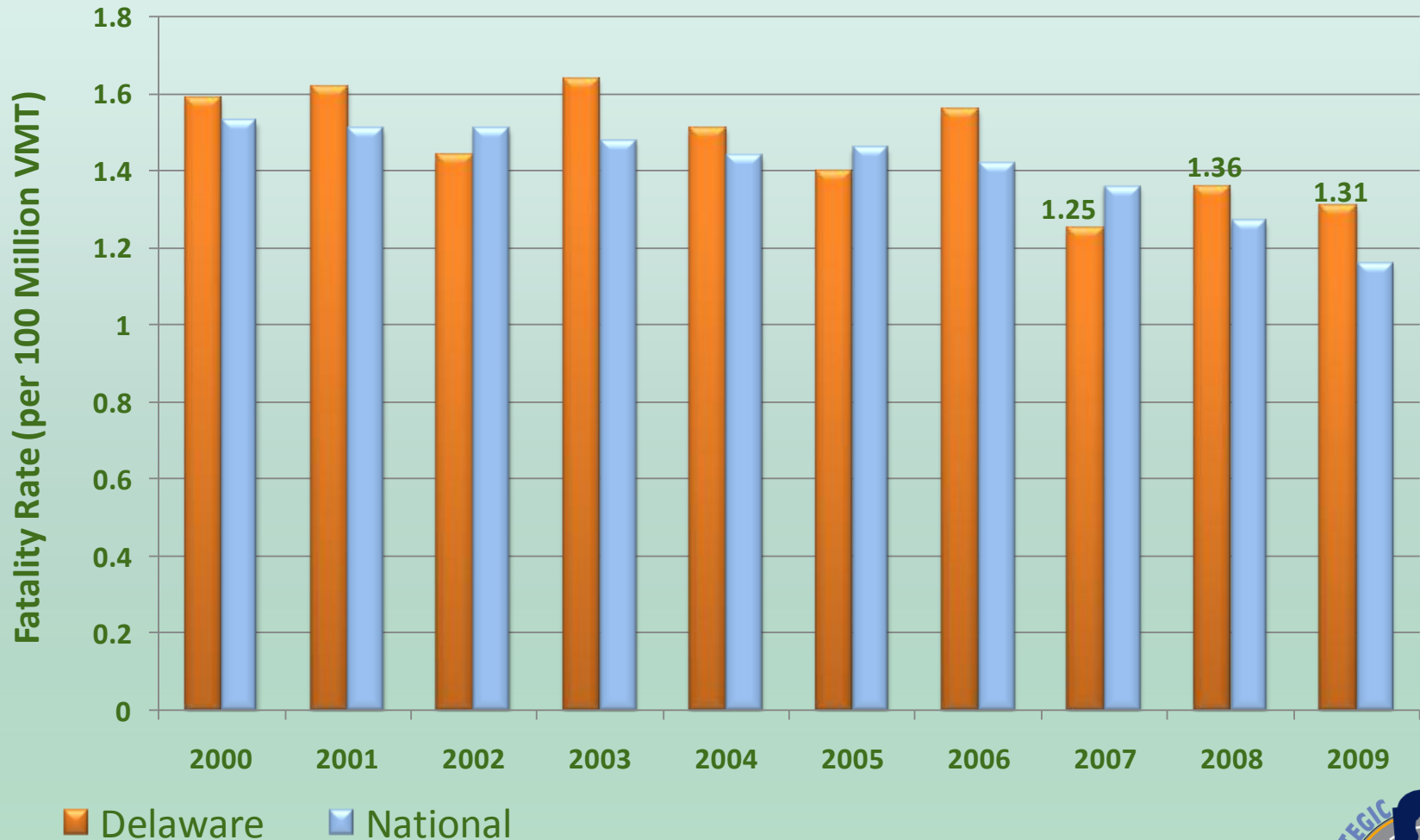
- ◆ Required as part of SAFETEA-LU, an SHSP is a comprehensive safety plan with a goal of reducing highway fatalities and serious injuries on all public roads
- ◆ Establishes consistent statewide goals, objectives, emphasis areas, priorities, and countermeasures with stakeholders and other transportation plans
- ◆ Makes effective use of State, regional, and local crash data and determines priorities based on crash data
- ◆ Addresses engineering, management, operation, education, enforcement, and EMS



Delaware's SHSP Timeline

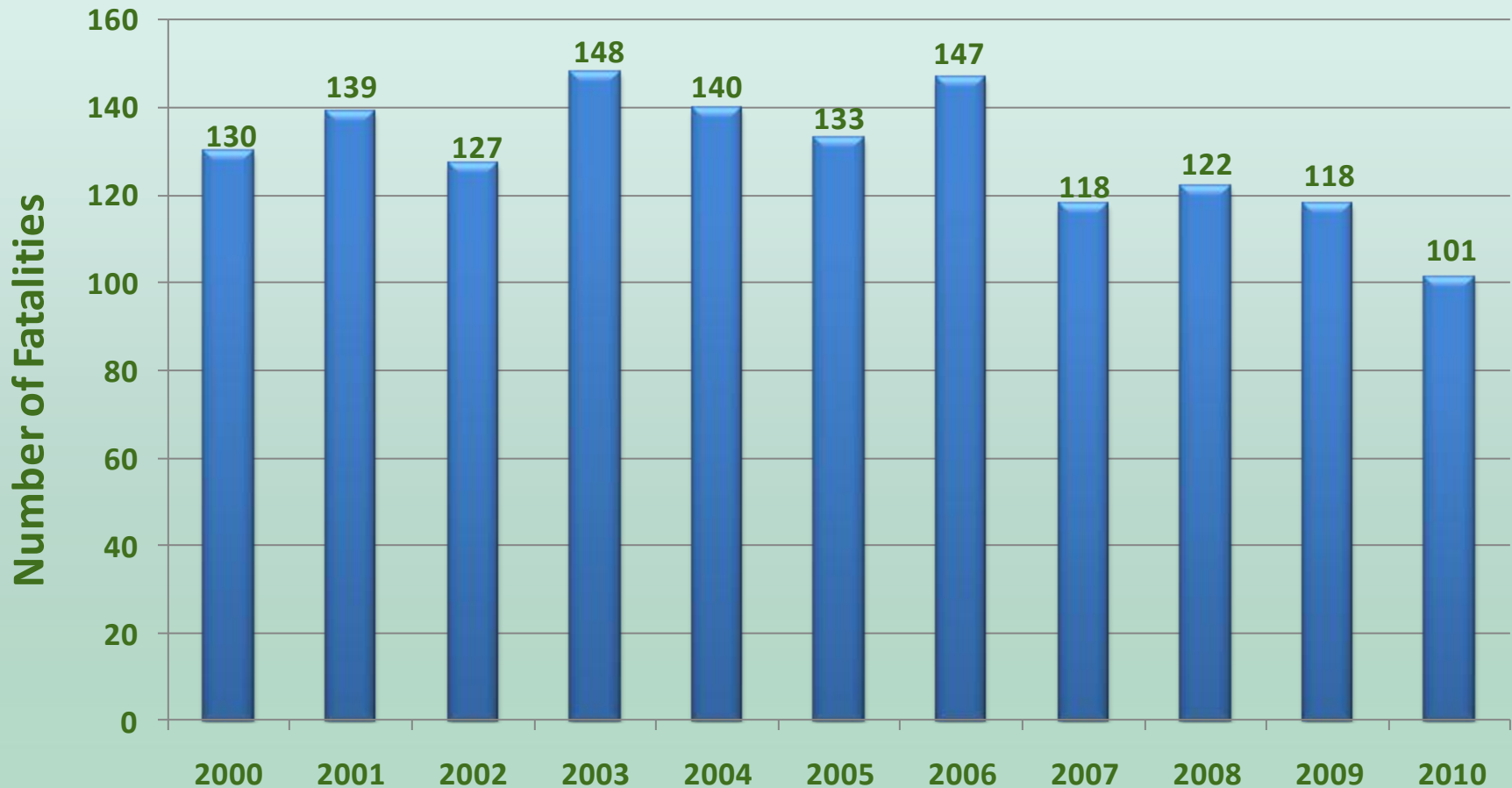


Delaware vs. National Fatality Rates (2000 – 2009)



Sources: FARS/NHTSA for national rates; DSP for Delaware rates

Total Fatalities in Delaware by Year (2000 – 2009)



Delaware's SHSP Process

- ◆ Determine stakeholders
- ◆ Define Mission and Vision for Plan
- ◆ Data-driven Emphasis Area Selection
 - Fatal crash data used to develop emphasis areas
- ◆ Select Strategies
- ◆ Evaluate Progress
- ◆ Develop and Adopt Plan
- ◆ Present Plan to Key Stakeholders
- ◆ Implement Plan
- ◆ Review and Update Plan
 - Next update in 2013 (every 3 years)



Delaware's SHSP Coordinating Agencies and Stakeholders

◆ Core Group

- FHWA
- NHTSA
- Delaware Department of Transportation
- Delaware Office of Highway Safety
- Delaware State Police
- Department of Justice
- Delaware Office of Emergency Medical Services



◆ Other Stakeholders

- Division of Motor Vehicles
- Dover/Kent County MPO
- WILMAPCO
- Trucking Industry
- Operation Lifesaver
- Department of Education



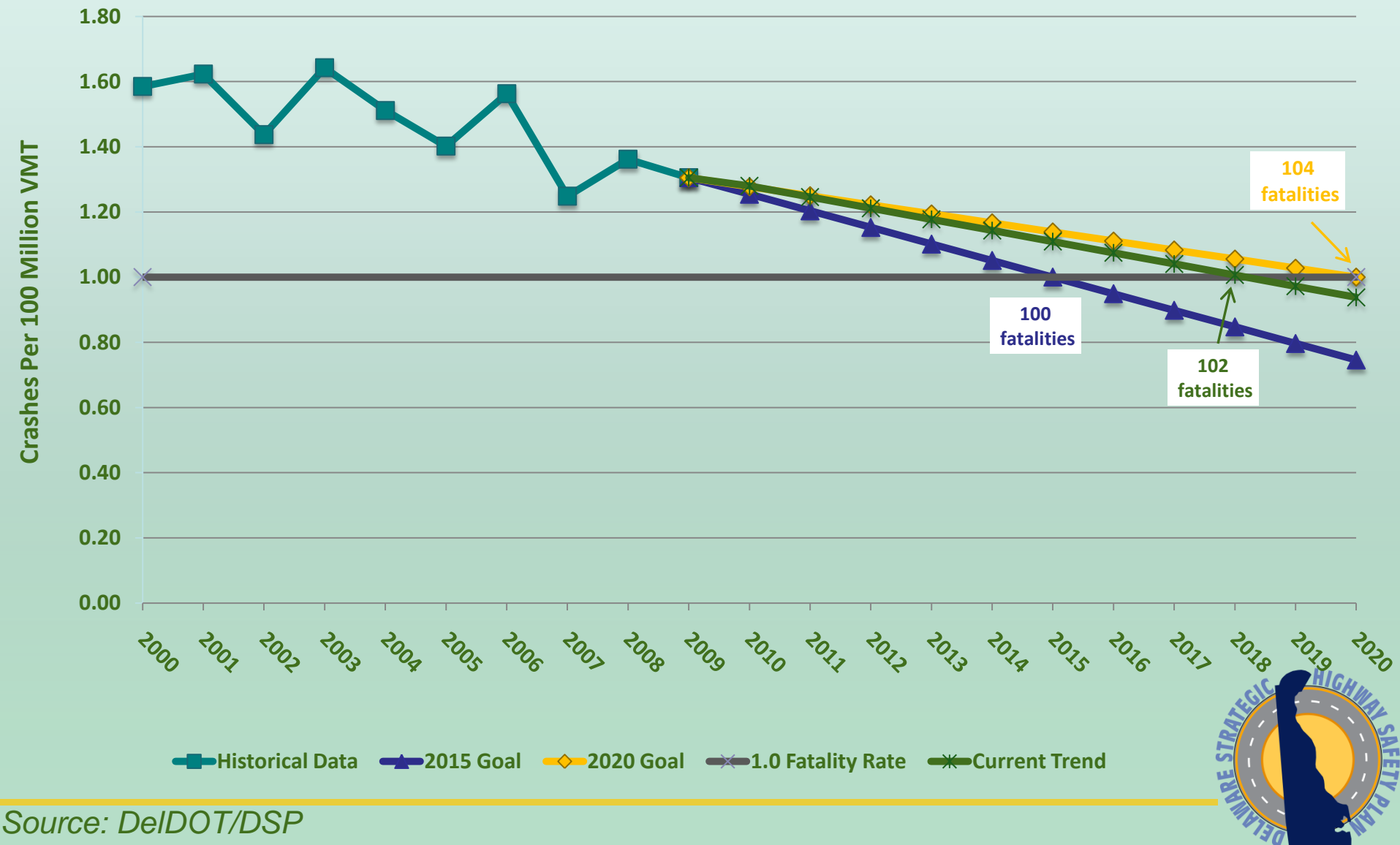
Delaware's 2010 SHSP

Mission and Vision Statements

- ♦ Mission Statement: The *Delaware Strategic Highway Safety Plan: Toward Zero Deaths* aims to eliminate fatalities on Delaware's roadways through a multi-agency approach that utilizes education, enforcement, engineering and emergency service strategies.
- ♦ Vision Statement: The goal of Delaware's *Strategic Highway Safety Plan* is to achieve a fatality rate of 1.0 per 100 million vehicle miles traveled per year by 2018.



Delaware Fatality Rates Per Year (2000 – 2020)



2010 Emphasis Area Selection

◆ Data Review

- Compared 2007 - 2008 national and statewide fatal crash data for each of AASHTO's emphasis areas
- Compared 2007 - 2008 statewide fatal crash data to 2001 – 2006 data

◆ Selected Emphasis Areas

- A higher fatal crash percentage in DE as compared to national averages (e.g., Curbing Aggressive Driving)
- One of the highest fatal crash percentages in DE (e.g., Increasing Seat Belt Usage)
- An increasing concern in the near future (e.g., Sustaining Proficiency in Older Drivers)

Note: Fatality data (rather than fatal crash data) was used for the emphasis area related to seat belt usage; 2009 data was not available at the time 2010 emphasis areas were selected



Previous Emphasis Areas

- ◆ Curbing Aggressive Driving
- ◆ Reducing Impaired Driving
- ◆ Increasing Seatbelt Usage and Improving Airbag Awareness
- ◆ Making Walking and Street Crossing Safer
- ◆ Making Truck Travel Safer
- ◆ Keeping Vehicles on the Roadway
- ◆ Minimizing the Consequences of Leaving the Road
- ◆ Designing Safer Work Zones
- ◆ Improving Information and Decision Support Services



Changes to Emphasis Areas in the 2010 Plan

- ◆ Eleven total emphasis areas, including 7 primary and 4 secondary emphasis areas
- ◆ The two emphasis areas related to roadway departures were combined into one
- ◆ Emphasis areas were prioritized based on crash data (listed in priority order)



Delaware's 2010 Emphasis Areas (listed in priority order)

◆ Primary Emphasis Areas

■ Data Driven

- Reducing the Frequency and Severity of Roadway Departure Crashes
- Curbing Aggressive Driving
- Increasing Seatbelt Usage
- Reducing Impaired Driving
- Improving the Design and Operation of Highway Intersections
- Making Walking and Street Crossing Safer
- Improving Motorcycle Safety and Increasing Motorcycle Awareness

◆ Secondary Emphasis Areas

■ Data Driven

- Sustaining Proficiency in Older Drivers
- Making Heavy Vehicle Travel Safer
- Designing Safer Work Zones

■ Non-Data Driven

- Improving Traffic Records



Data Summary (2007 – 2008)

PRIMARY EMPHASIS AREA	NATIONAL PERCENTAGE	DELAWARE PERCENTAGE
1 - Reducing the Frequency and Severity of Roadway Departure Crashes	53%	47%
2 - Curbing Aggressive Driving	53%	55%
3 - Increasing Seatbelt Usage	50%	40%
4 - Reducing Impaired Driving	31%	37%
5 - Improving the Design and Operation of Highway Intersections	22%	25%
6 - Making Walking and Street Crossing Safer	12%	17%
7 - Improving Motorcycle Safety and Increasing Motorcycle Awareness	14%	15%
SECONDARY EMPHASIS AREA	NATIONAL PERCENTAGE	DELAWARE PERCENTAGE
1 - Sustaining Proficiency in Older Drivers	15%	12%
2 - Making Heavy Vehicle Travel Safer	12%	7%
3 - Designing Safer Work Zones	2%	2%
4 – Improving Traffic Records	N/A	N/A

 Delaware percentage is greater than national percentage



Performance-Based Goals for Each Primary Emphasis Area

- ◆ Intermediate (i.e., 2012, 2015, and 2018) performance-based goals for each primary emphasis area have been established
- ◆ Goals are based on the overall goal and vision statement, which equates to a 5% reduction in fatal crashes (fatalities) every 3 years
- ◆ Performance-based goals can be used to evaluate progress within each emphasis area during the 2013, 2016, and 2019 plan updates



2012, 2015, and 2018

Primary Emphasis Area Goals

EMPHASIS AREA	NUMBER OF FATAL CRASHES (FATALITIES)			
	2009	2012 GOAL	2015 GOAL	2018 GOAL
1 - Reducing the Frequency and Severity of Roadway Departure Crashes	50	48	45	43
2 - Curbing Aggressive Driving	40	38	36	34
3 - Increasing Seat Belt Usage	41 (fatalities)	39 (fatalities)	37 (fatalities)	35 (fatalities)
4 - Reducing Impaired Driving	28	27	25	24
5 - Improving the Design and Operation of Highway Intersections	18	17	16	15
6 - Making Walking and Street Crossing Safer	14	13	12	11
7 - Improving Motorcycle Safety	13	12	11	10

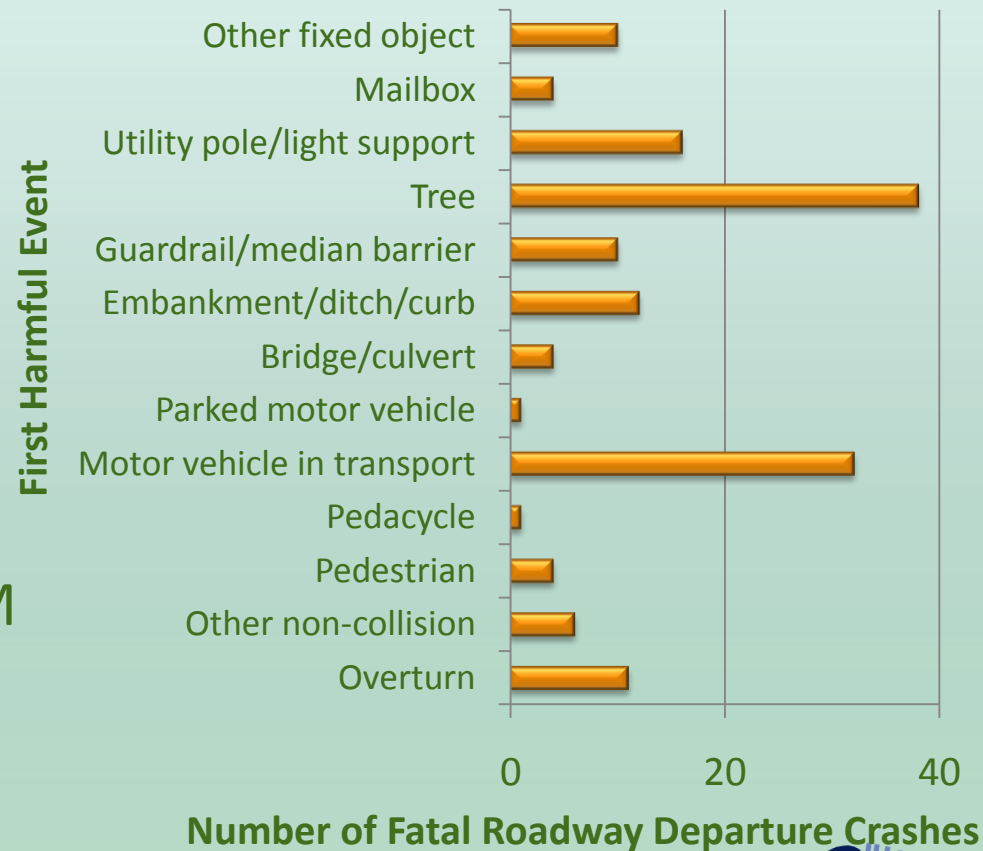
Note: Intermediate goals are based on an overall goal of reducing the total number of fatalities from 118 in 2009 to 102 in 2018 (i.e., a 5% reduction every three years)



Primary Emphasis Area 1: Reducing the Frequency and Severity of Roadway Departure Crashes

◆ Characteristics of fatal roadway departure crashes:

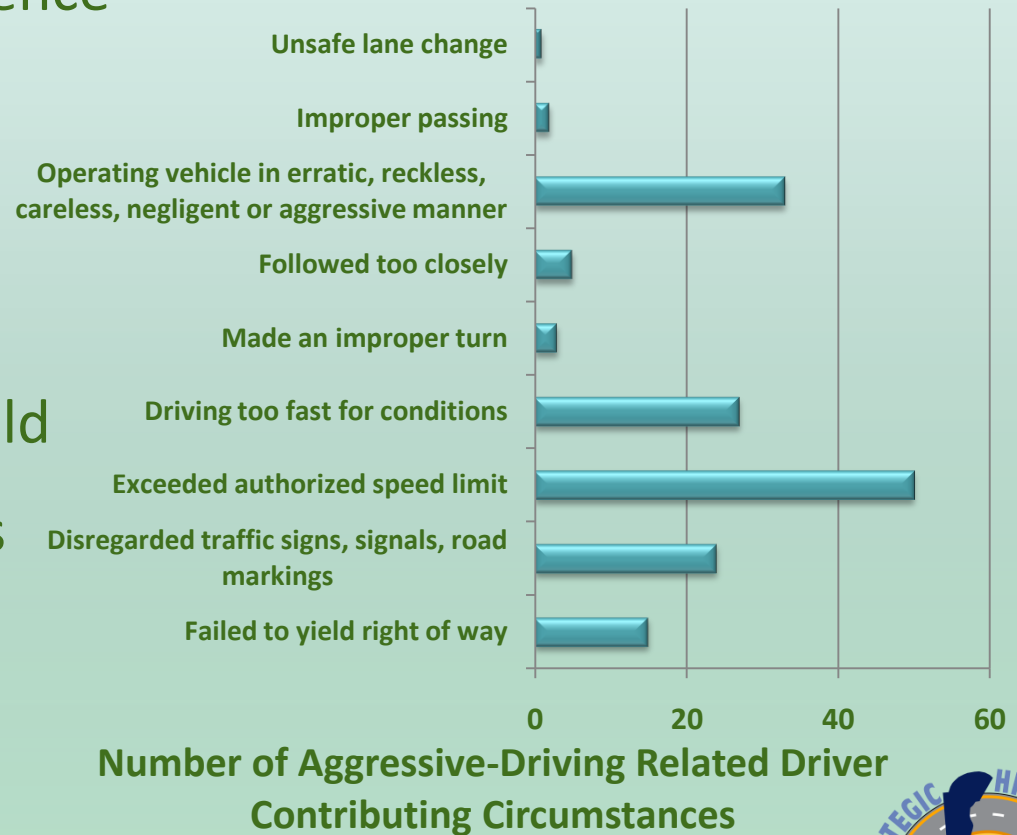
- Driving under the influence
- Unrestrained motorists
- Speeding
- Rural, collector roadways
- Males, 15 to 24 years old
- Weekends, Midnight to 3 AM
- Trees



Primary Emphasis Area 2: Curbing Aggressive Driving

◆ Characteristics of fatal aggressive driving crashes:

- Driving under the influence
- Speeding
- Roadway departures
- Rural roadways
- Males, 15 to 24 years old
- Unrestrained motorists



Primary Emphasis Area 3: Increasing Seat Belt Usage

◆ Characteristics of unrestrained fatalities :

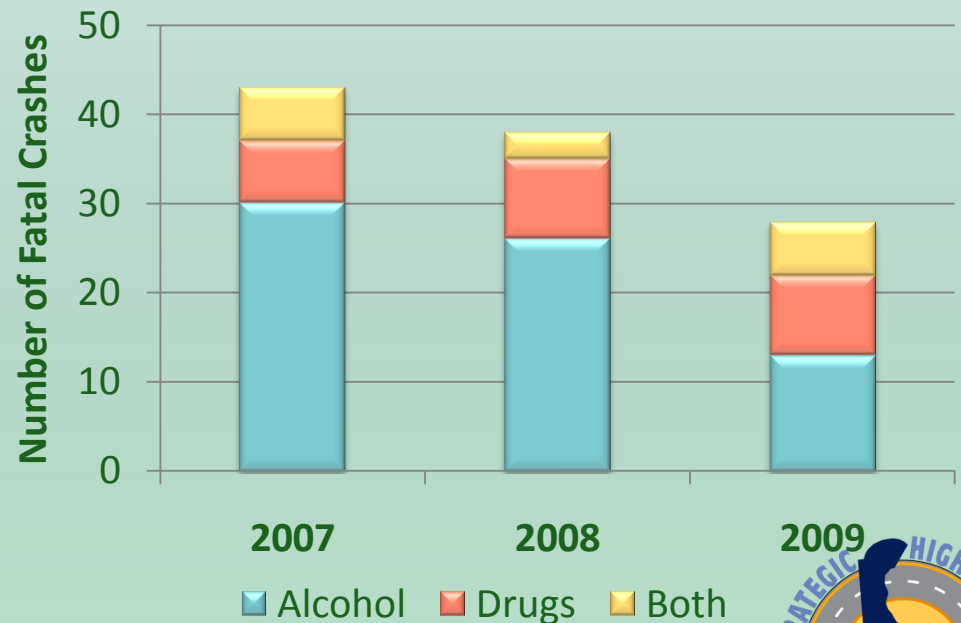
- Collectors and local roadways
- Rural roadways
- Males, 15 to 24 years old
- Roadway departures
- Midnight to 3 AM
- Impaired and/or aggressive drivers



Primary Emphasis Area 4: Reducing Impaired Driving

◆ Characteristics of fatal impaired driving crashes:

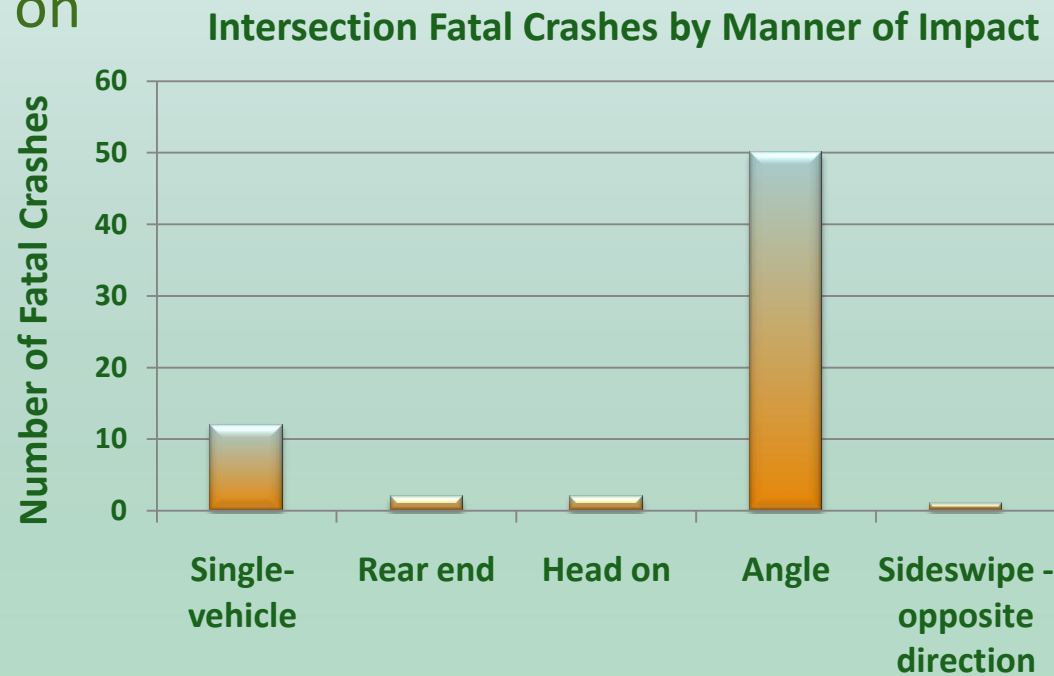
- Rural roadways
- Collector and local roadways
- Saturdays, Midnight to 3 AM
- Males, 15 to 34 years old
- Roadway departures
- Aggressive driving
- Unrestrained motorists



Primary Emphasis Area 5: Improving the Design and Operation of Highway Intersections

◆ Characteristics of fatal intersection crashes:

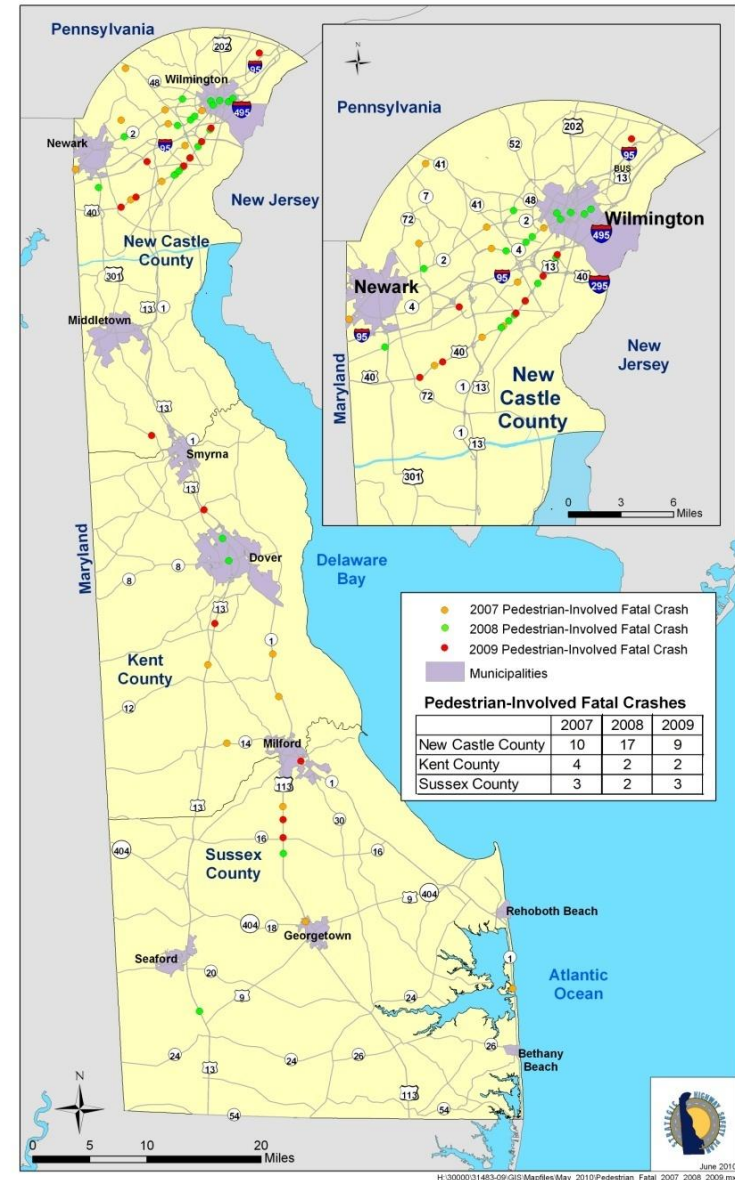
- Principal arterial roadways
- 33% of crashes occurred on dark, unlit roadways
- Aggressive driving
- Angle crashes



Primary Emphasis Area 6:

Making Walking and Street Crossing Safer

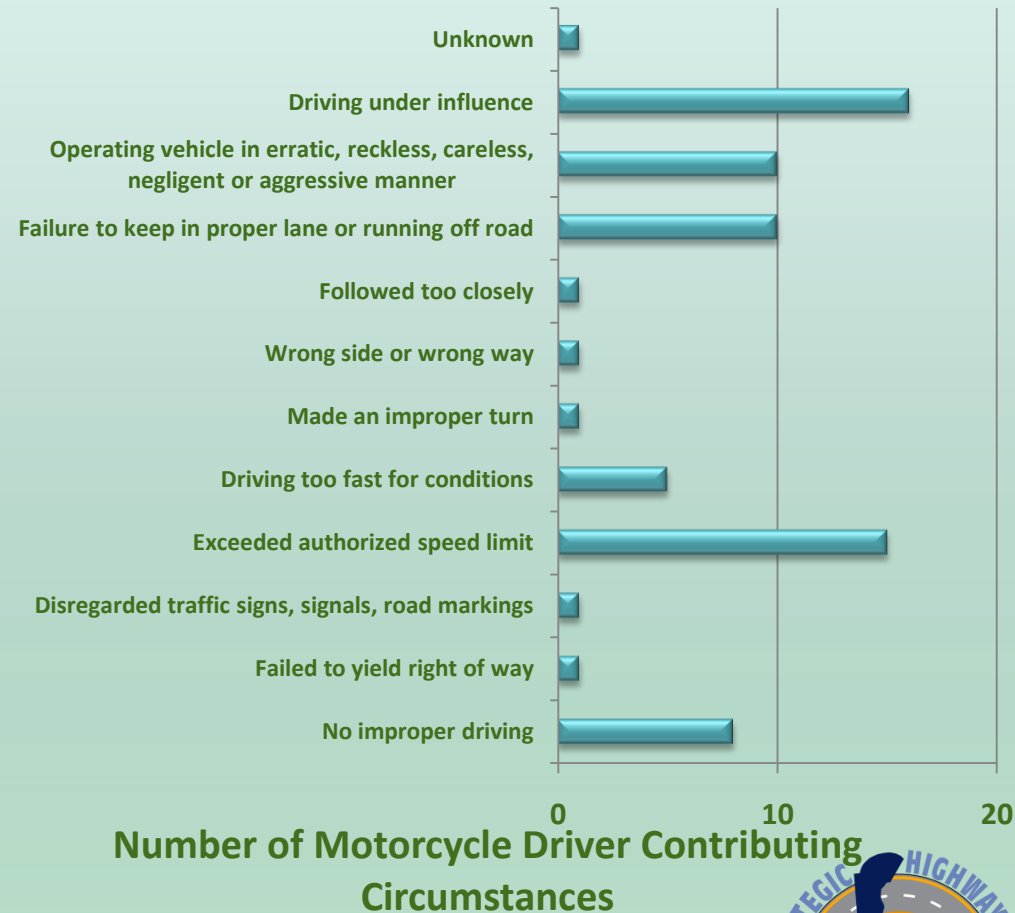
- ◆ Characteristics of fatal pedestrian crashes:
 - Urban, principal arterial roadways
 - Males, 45 to 54 years old
 - Saturdays, 9 PM to midnight
 - US 40/US 13 corridors in New Castle County
 - Mid-block locations
 - Impaired pedestrians
 - Pedestrian is generally at-fault



Primary Emphasis Area 7: Improving Motorcycle Safety and Increasing Motorcycle Awareness

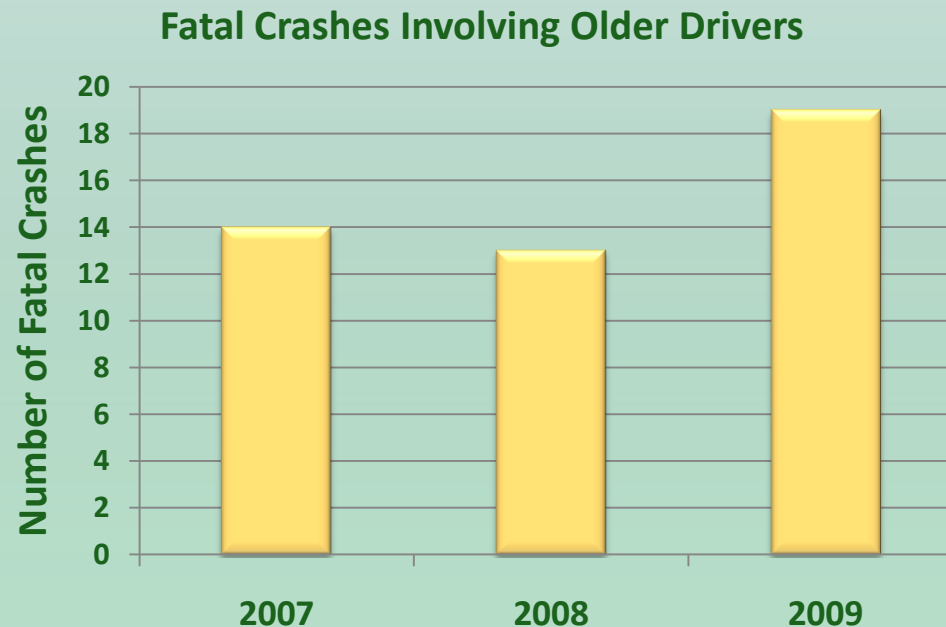
◆ Characteristics of fatal motorcycle crashes:

- 3 PM to 6 PM
- Males, 35 to 54 years old
- Roadway departures
- Impaired driving
- Speeding
- Not wearing a helmet



Secondary Emphasis Area 1: Sustaining Proficiency in Older Drivers

- ◆ Characteristics of older driver crashes:
 - Collector and local roadways
 - 12 PM to 3 PM
 - The older driver was not at-fault in approximately half the crashes

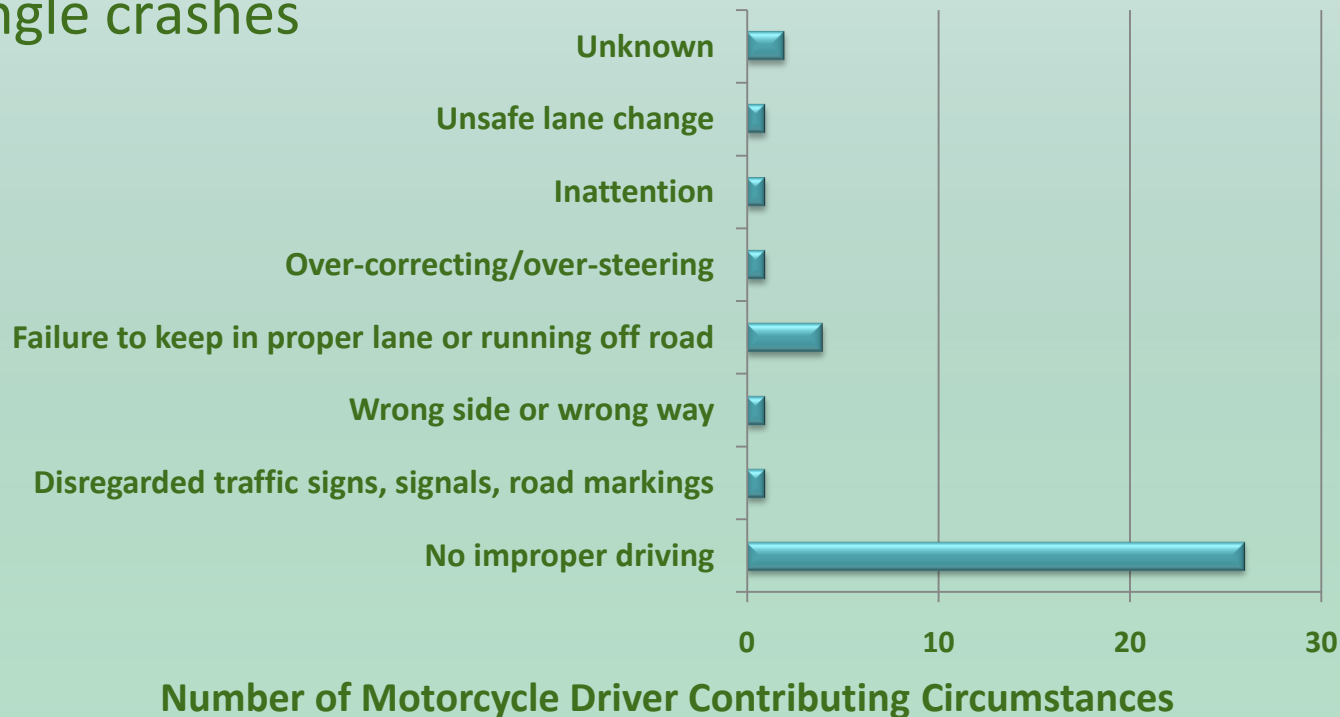


Secondary Emphasis Area 2:

Making Heavy Vehicle Travel Safer

◆ Characteristics of heavy vehicle fatal crashes:

- Rural roadways
- 12 PM to 3 PM and Midnight to 3 AM
- Angle crashes
- The driver of the heavy vehicle was not at-fault in 70% of crashes



Secondary Emphasis Area 3: Designing Safer Work Zones

- ◆ Characteristics of work zone fatal crashes – 3 total crashes:
 - All occurred at nighttime
 - All occurred in 2008
 - Workers were not present
 - 2 crashes occurred on I-95; 1 crash occurred on SR 141
 - All involved alcohol



Secondary Emphasis Area 4:

Improving Traffic Records

- ◆ Traffic Records Coordinating Committee (TRCC) Mission
 - Make information needed to effectively manage transportation safety available to the transportation safety community
- ◆ Traffic Records Coordinating Committee (TRCC) goals:
 - Facilitate the comprehensive collection, maintenance, and dissemination of traffic safety related data to set the direction for traffic safety improvement measures
 - Improve the timeliness, accuracy, completeness, uniformity, and accessibility of data that is needed to identify priorities for traffic safety programs
 - Strive to ensure that all Traffic Safety Information System projects funded by and under the direction of the TRCC, move forward on schedule and within budget. For projects outside of this scope, use the authority of the TRCC to ensure that these projects move forward in a timely manner, recognizing budgetary and staffing constraints.



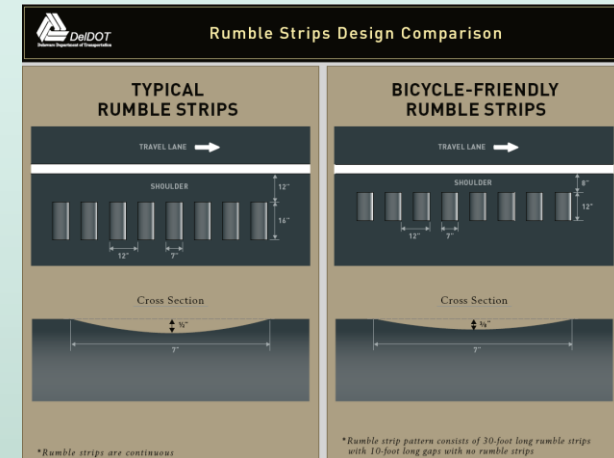
Strategy Selection

- ◆ Strategies based on the three E's of safety
 - Engineering
 - Education
 - Enforcement
- ◆ Emphasis placed on cost-effective and proven countermeasures
- ◆ Strategies were selected for each emphasis area; however, many strategies address multiple emphasis areas



Examples of Engineering Strategies

- ◆ System and policy initiatives
 - Develop system-wide procedure for installation of rumble strips
 - Develop standards for using skid resistant pavements
 - Provide uniform traffic control devices statewide
 - Consider pedestrian accommodations for all projects
- ◆ Spot or target location improvements
 - Widen and/or pave shoulders in target locations
 - Remove, relocate, shield or delineate fixed objects
 - Coordinate traffic signals and improve signal timings
 - Perform pedestrian safety audits for roadways and intersections



Examples of Education Strategies

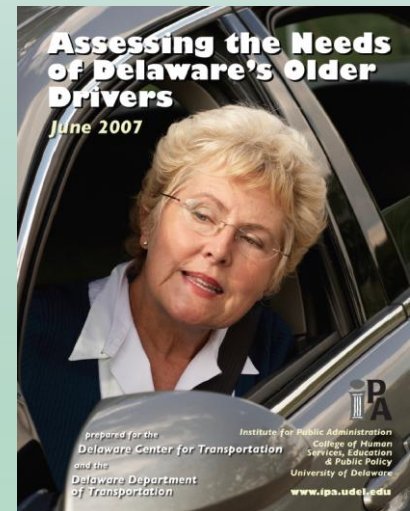
◆ Public information and education campaigns

- Aggressive driving campaigns
- Pedestrian safety campaigns
- Designated Driver Program



◆ Educate high-risk drivers

- Improved driver education classes that focus on high-risk behaviors
- Increased awareness through defensive driving courses
- Improved motorcycle driver training
- Educate servers and liquor store workers on identifying impaired persons and discouraging them from driving



Examples of Enforcement Strategies

- ◆ Improve compliance with traffic laws
 - Increased enforcement funding to better address high-risk behavior
 - Promote use of 911 to report impaired or aggressive driving
 - Provide specialized law enforcement training
- ◆ Support legislative action to strengthen laws
 - Conduct judicial outreach to promote consistency in verdicts and sentencing
 - Increase point structure and penalties for aggressive driving
 - Conduct high visibility enforcement campaigns



Implementation

- ◆ The goals and strategies included in the plan should be incorporated into other safety programs and initiatives, when possible
- ◆ Programs and projects should be prioritized based on their consistency with the *SHSP*
- ◆ Development of Implementation Teams is underway
 - Teams will meet quarterly or semi-annually to discuss implementation and evaluate and monitor safety initiatives and their effectiveness

